May 5, 2004

Dan Meadors, General Manager
Canyon Fuel Company, LLC.
HC 35 Box 380
Helper, Utah 84526

Re: Abandonment of Mining Machinery, Canyon Fuel Company, LLC, Skyline Mine, C/007/0005, Task ID #1913, Outgoing File

Dear Mr. Meadors:

The above-referenced amendment is approved effective May 5, 2004. A stamped incorporated copy is enclosed for your copy of the Mining and Reclamation Plan.

If you have any questions, please feel free to call me at (801) 538-5268 or Stephen J. Demczak at (435) 613-5242.

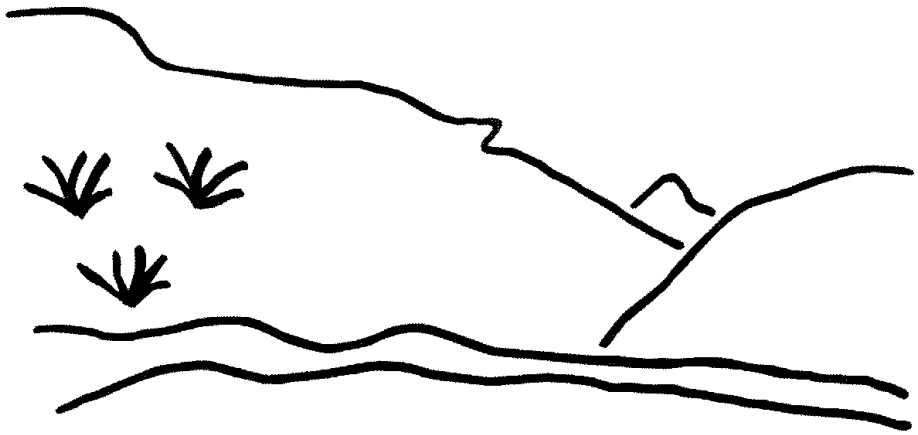
Sincerely,

/S/

Pamela Grubaugh-Littig
Permit Supervisor

SJD/sd
Enclosure
cc: Ranvir Singh, OSM
Jim Kohler, BLM
Alice Carlton, USFS (2)
Mark Page, Water Rights w/o
Dave Ariotti, DEQ w/o
Derris Jones, DWR w/o
Price Field Office
O:\007005.SKY\FINAL\App1913.doc

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Skyline Mine
Abandonment of Mining Machinery
C/007/005
Task ID #1913
Technical Analysis
May 5, 2004

TABLE OF CONTENTS

TABLE OF CONTENTS

TECHNICAL ANALYSIS

The Division regulates the Surface Mining Control and Reclamation Act of 1977 (SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at http://ogm.utah.gov/coal

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

INTRODUCTION

Skyline mine is requesting to abandon eighty-two longwall shields in Mine #2. These shields have become trapped underground from a recent roof fall in the main haulage way. The location is near 6th Left, Panel B. The permittee contends that re-supporting the roof will significantly narrow the main haulage way, making it unsafe to move large shields through the narrow entry.

The permittee contends that no hazardous substances including fluids are within the shields. The fluids were removed prior to their initial storage.

INTRODUCTION

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Probable Hydrologic Consequences Determination

In Section 2.5, page 2-51c of the MRP, the Operator provides a brief discussion making a commitment that any equipment left underground will be drained of hazardous materials and lubricating fluids prior to being abandoned when possible. This has been done to the respective K-B longwall shields. The MRP also states, "Since the equipment is steel and not too different compositionally from the roof supports throughout the mine, contamination to the ground water from abandoned equipment is not anticipated." The Division concurs with this assessment. Even in the event the equipment is saturated with water due to flooding of the mine, available oxygen would be negligible, which prohibits the decomposition of the steel.

Findings:

The information provided adequately addresses the minimum requirements of the Hydrologic Resource Information section of the regulations.

OPERATION PLAN

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal Of Noncoal Mine Wastes

A letter received March 5, 2004, at the Division, requested approximately 82 K-B longwall shields were to be left underground at the Skyline Mine. The eighty-two (approximately) longwall roof supports are manufactured by Kloeckner-Becorit. The roof supports are classified as 2-leg, 680-ton, G-shaped shields with rigid base and rigid canopy. Each support weighs approximately 19-tons. The majority of all hazardous substances have been drained from the equipment.

A considerable tonnage of ferrous materials – such as steel roof bolts, wire mesh, and cans used in support pillars – is routinely abandoned underground coal mines because the materials cannot be removed without endangering the lives of miners. The amount of steel in the equipment to be abandoned in on the order of 1,600-tons, but this additional steel is probably not significant considering the amount of routinely abandoned during underground mining operations during the life of a mine. At the Genwal Crandall Canyon Mine, room-and-pillar mining requires approximately 400 tons of steel be placed and abandoned underground to produce each million tons of coal. Using 400-tons steel/ 1million –tons coal, the Co-Op Bear Canyon mine from 1998 through 2003 produced an average of 900,000-tons of coal, which would equate to approximately 2,200 tons (total) of steel left underground. However, longwall mining, as at Skyline, would be expected to use steel at a considerably lower rate. From 1996 to 1999, production at the Skyline Mine was on the order of 4 million tons/year. The 1,600-tons of equipment abandonment would be anticipated for a room-and-pillar operation, and significantly above what Skyline normally leaves. However, over the life of the mine, the total amount that Skyline has left underground is still anticipated to be less than a standard room-and-pillar operation.

Majority of the fluids have been removed from the shields. The entire coal mine roof support system consist of steel such as roof bolts, trusses, and square sets. These products cannot be removed after mining has been halted. Therefore, the addition of eight-two shields left underground would not be a significant impact with regards to non-coal waste. The hydrologist reviewing this amendment will determine if these longwall shields will impact the hydrologic balance.

Findings:

The permittee has met the minimum requirement of this portion of the engineering section.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

General

The Division is currently updating a Cumulative Hydrologic Impact Assessment (CHIA) for the Mud Creek and Upper Huntington Creek basins, which includes the Skyline Mine. The document was last updated August 2003. Abandonment of equipment underground was not covered in this CHIA. Consequences from abandoned mining machinery and fluids were included in the Probable Hydrologic Consequences (PHC) determination in the Skyline Mine MRP.

Water encountered in the mine has little communication with the surface and is not subject to annual recharge events. Due to conditions encountered in the 10-Left portion of the mine, it is currently anticipated the abandoned equipment will eventually be flooded.

Assuming the mine floods and the abandoned equipment is covered by water, several probable results and impacts can be evaluated:

- Flooding of the abandoned mine will likely be relatively rapid, but once flooded, flow of groundwater into, through, and out-of the void spaces of the mine should be slow.

- If steel or other metals in the equipment were to oxidize, it would be at a very slow rate and the amount of iron and other metals added to the groundwater at any one time would be very small.
- Oxides of most metals are insoluble or slightly soluble in water (anions in solution in the water could increase solubility, but this is not anticipated based on typical ground-water chemistries of the region). At temperatures expected in the mine, the metal oxides would tend to precipitate as solids within the mine rather than flow in solution in the ground water. If any metal were to go into solution, concentrations would be highest near the abandoned equipment, but the volume of water in the flooded mine would dilute concentrations outside the immediate vicinity of the equipment.
- Because of dilution and dispersion, natural seasonal fluctuations, and the limits of accuracy of analytical methods, changes in water quality would not be expected to be large enough to be detected at the surface at springs, ground water base flow to streams, or in discharges from the mine.

Findings:

Abandoning the K-B longwall shields will cause minimal, if any, disturbance to the hydrologic balance within the permit and adjacent areas and is not expected to cause material damage outside the permit area. Any potential adverse impacts will be observed in surface- and ground-water monitoring currently being conducted. No additional information is required to address the minimum requirements of the Operation Plan – Hydrologic Information section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mine Workings Maps

The permittee has submitted Drawing No. 2.3.6-3. This map gives detail were abandoned mining equipment is located underground. On the map, designation 04F is shown to be “Potential”. This is to leave the active longwall underground if it cannot be safely retracted. Division has approved this action in a prior amendment.

The map does indicate the caved areas prohibiting the removal of the eight-two shields. This information has reaffirm that the shields cannot be retrieved safely.

Certification Requirements

The permittee has P.E. certified Drawing 2.3.6-3. This is a requirement for mine working maps.

Findings:

The permittee has met the minimum requirements of this section.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

This amendment will not change the reclamation plan.

Findings:

The permittee has met the minimum requirements of this section.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

This amendment will not change the bonding amounts.

Findings:

The permittee has met the minimum requirements of this section.